## IN THE CLAIMS

Please amend the claims as shown below:

1. (Currently amended) A method of making a no wash bead based assay, the method comprising:

preparing a first reagent comprising a buffer; preparing a second reagent comprising a protein;

preparing beads of preselected size and having a coefficient of variation less than 5%, including washing the beads in the buffer to form a bead-buffer matrix and reducing the surfactancy of the beads to no more than 5% to allow antigens to attach to the beads;

adding an antigen for detecting the presence of a target species to the bead-buffer matrix such that the antigen attaches to the beads to form a bead-antigen mixture, the surfactancy of the beads facilitating attachment of the antigen thereto;

adding the first reagent buffer to the bead-antigen mixture and thereafter incubating the mixture; and

adding the second reagent to the bead-antigen mixture to reduce or eliminate non-specific binding sites.

- 2. (Original) A method as claimed in claim 1 wherein the first reagent is a carbonate buffer.
- 3. (Original) A method as claimed in claim 2 wherein the carbonate buffer has a pH in the range of 9.0 10.0.
- 4. (Original) A method as claimed in claim 3 wherein the carbonate buffer has a pH of 9.6.
- 5. (Original) A method as claimed in claim 1 wherein the second reagent is bovine serum albumin (BSA).

- 6. (Original) A method as claimed in claim 5 wherein the BSA comprises a 0.1 5.0% BSA in saline.
- 7. (Original) A method as claimed in claim 6 wherein the BSA is a 0.5% BSA in saline.
- 8. (Previously amended) A method as claimed in claim 1 wherein the size of the beads is selected from one or more of the groups consisting of  $3\mu$  latex beads,  $4\mu$  latex beads,  $5\mu$  latex beads,  $6\mu$  latex beads,  $7\mu$  latex beads,  $8\mu$  latex beads,  $9\mu$  latex beads and  $10\mu$  latex beads.
- 9. (Original) A method as claimed in claim 8 wherein the beads are selected so as to have a coefficient of variation not exceeding 5%.
- 10. (Original) A method as claimed in claim 9 wherein the beads are selected so as to have a coefficient of variation not exceeding 1.3%.
- 11. (Original) A method as claimed in claim 8 wherein multiple sizes of beads are selected.
- 12. (Previously amended) A method as claimed in claim 1 wherein the antigen added is selected from the group consisting of RnP/Sm antigen, Sm antigen, SS-A antigen, SS-B antigen, Scl-70 antigen and dsDNA antigen.
- 13. (Previously amended) A method as claimed in claim 1 wherein the antigens are selected from one or more of the groups consisting of histones, lipids, viral antibodies, viral antigens, bacterial antibodies, bacterial antigens, recombinant proteins, and

cellular antigens.

- 14. (Previously amended) A method as claimed in claim 1 wherein the surfactancy of the beads is reduced to no more than 5% in order to enhance the ability to coat the beads with antigens.
- 15. (Previously amended) A method as claimed in claim 14 wherein the surfactancy is no more than 0.5% of the beads.
- 16. (Original) A method as claimed in claim 1 wherein the bead-based assay is prepared in a flat-bottom container.
- 17. (Original) A method as claimed in claim 1 wherein the bead-buffer matrix is subjected to at least one prewashing step.
- 18. (Original) A method as claimed in claim 1 further comprising the step of centrifuging the bead-buffer matrix and the bead-antigen mixture, and the resuspension thereof.
- 19. (Original) A method as claimed in claim 1 further comprising the step of vortexing the bead-buffer matrix and the bead-antigen mixture, and the resuspension thereof.
- 20. (Withdrawn)
- 21. (Withdrawn)
- 22. (Withdrawn)
- 23. (Withdrawn)
- 24. (Withdrawn)

- 25. (Withdrawn)
- 26. (Original) A no wash bead based assay for testing for the presence of a target substance, the assay being prepared according to the method of claim 1.

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